

Tool for assessing quality of parameters for description

Simple version

Why choice of parameters?

Modern education aims to develop learners' thinking. Thinking is reflected in the quality of choices one makes when dealing with non-typical situations. One of the aspects involved in the choice is that of parameters of elements in the process of solving a problem. We need them when describing something, when we would like to compare different objects and phenomena or when deciding which characteristic is more important for us in this or that situation. Parameters are essential in any school discipline starting from learning to make a fairy tale to solving a maths problem. Teachers, however, might prefer different terms to refer to the concept, such as criteria in humanities or variables in sciences.

Who can benefit from this tool?

This tool can be useful if

- you invite your learners to define parameters when doing tasks in your discipline;
- you believe there are still things to improve about the quality of parameters your learners come up with;
- you would like to learn more about generic ways of improving the quality of parameters learners choose.

To help you decide if your learners need better quality parameters, think how happy you are with the quality of their descriptions and classifications or the way they structure their products and build models of given situations. If you are not, you can definitely benefit by helping them become more aware of this aspect of thinking.

When can this tool be used?

This tool can be used any time your learners produced something where a choice of parameters was involved. Using the tool will help you go beyond the focus of a particular task and concentrate on one of the meta-subject or transversal skills. As a result, you will be able to define the current level of learners' skills for description and those aspects you can draw learners' attention to for helping them improve the quality of their results.

How can this tool be used?

When developing thinking skills, we help the learner become better at

- considering parameters in relation to a specific element;
- proposing parameters with a clear set of values;
- ensuring sufficient scope of the proposed parameters for a given context;
- defining essential parameters for the chosen problem.

There are **four aspects** one can evaluate when looking at the choice of parameters:

1. connection <of the proposed parameters> with the element
2. set of values <of the proposed parameters>
3. scope <of the proposed parameters>
4. essence <of the proposed parameters>

Three evaluation parameters help us monitor the process of learner improvement:

1. awareness
2. disposition
3. independence

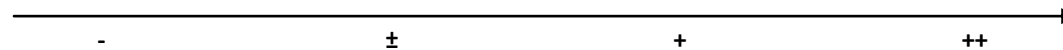
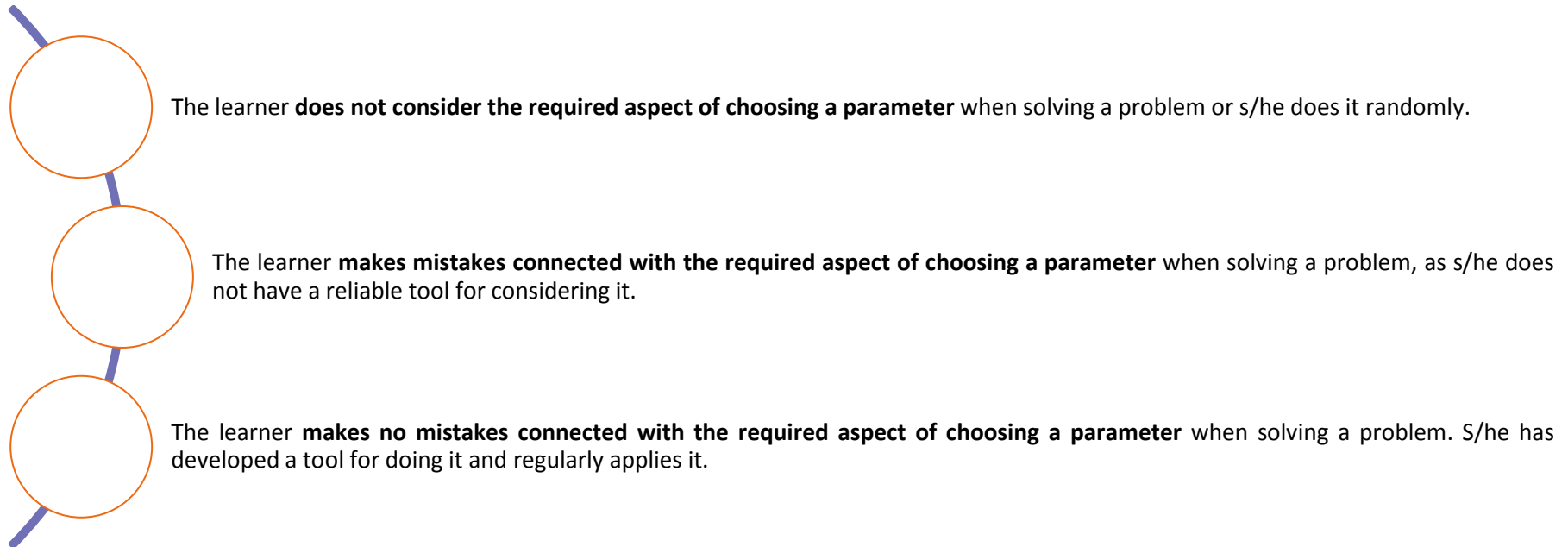
Under each parameter, the learner is moving from being a novice to becoming competent.



Please note that the assessment of thinking only makes sense in a situation when the learner is working on a non-typical problem, i.e. s/he is not aware of either a solution or a path towards obtaining it.

Evaluation parameters

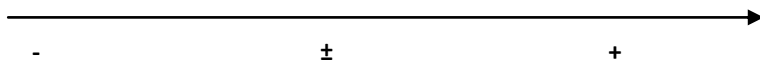
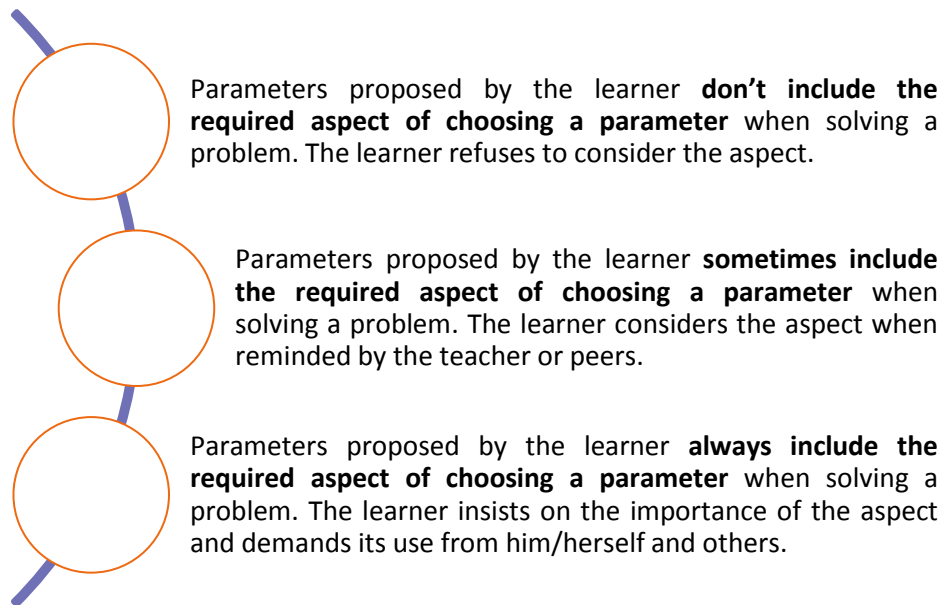
AWARENESS OF A PARTICULAR ASPECT WHEN MAKING A CHOICE OF A PARAMETER



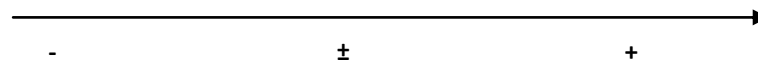
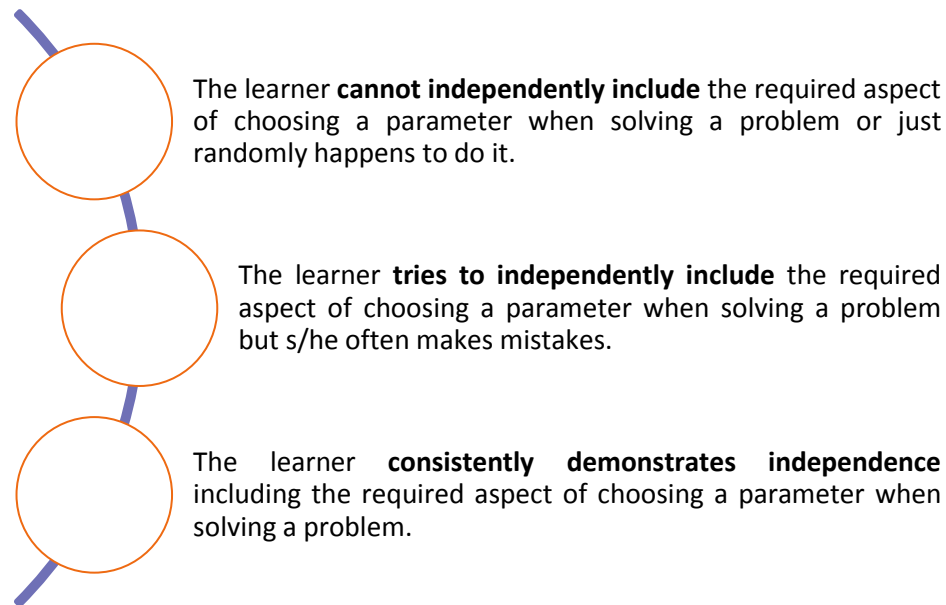
There are **four aspects** one can evaluate when looking at the choice of parameters:

1. connection <of the proposed parameters> with the element
2. set of values <of the proposed parameters>
3. scope <of the proposed parameters>
4. essence <of the proposed parameters>

DISPOSITION OF THE LEARNER TOWARDS CONSIDERING A PARTICULAR ASPECT WHEN MAKING A CHOICE OF A PARAMETER



INDEPENDENCE OF THE LEARNER IN THE PROCESS OF CONSIDERING A PARTICULAR ASPECT WHEN MAKING A CHOICE OF A PARAMETER



There are **four aspects** one can evaluate when looking at the choice of parameters:

1. connection <of the proposed parameters> with the element
2. set of values <of the proposed parameters>
3. scope <of the proposed parameters>
4. essence <of the proposed parameters>



Individual student assessment sheet

Quality of parameters: awareness, disposition & independence

There are **four aspects** one can evaluate when looking at the choice of parameters:

1. connection <of the proposed parameters> with the element
2. set of values <of the proposed parameters>
3. scope <of the proposed parameters>
4. essence <of the proposed parameters>

Student name	Student's model	<p>Awareness of _____ <i>(write the aspect you assess)</i></p> <p>Does not consider Considers but makes mistakes Considers without mistakes - +/- +</p> <p>_____→</p>
S1		<p style="text-align: center;">Disposition of students</p> <p>Refuses to do Does when reminded Does regularly - +/- +</p> <p>_____→</p>
		<p style="text-align: center;">Independence of students</p> <p>Can't do Tries to do but makes mistakes Can do independently - +/- +</p> <p>_____→</p>
<p>Progress bar</p> <p>novice _____→ competent</p> <p style="text-align: center;">- +/- + ++ +++</p>		



Class assessment sheet

Quality of parameters: awareness, disposition & independence

There are **four aspects** one can evaluate when looking at the choice of parameters:

1. connection <of the proposed parameters> with the element
2. set of values <of the proposed parameters>
3. scope <of the proposed parameters>
4. essence <of the proposed parameters>

Class _____

Date of assessment	Awareness of _____ <i>(write the aspect you assess)</i>			Disposition of students			Independence of students			Notes
	Do not consider	Consider but make mistakes	Consider without mistakes	Refuse to do	Do when reminded	Do regularly	Can't do	Try to do but make mistakes	Can do independently	
T1	All Most Half Few None	None Few Half Most All	None Few Half Most All	All Most Half Few None	None Few Half Most All	None Few Half Most All	All Most Half Few None	None Few Half Most All	None Few Half Most All	
T2	All Most Half Few None	None Few Half Most All	None Few Half Most All	All Most Half Few None	None Few Half Most All	None Few Half Most All	All Most Half Few None	None Few Half Most All	None Few Half Most All	
T3	All Most Half Few None	None Few Half Most All	None Few Half Most All	All Most Half Few None	None Few Half Most All	None Few Half Most All	All Most Half Few None	None Few Half Most All	None Few Half Most All	